

GEOKINETICS INC.

shale oil development and production

582 north vernal avenue • p.o. box 889 • vernal, utah 84078 • telephone (801) 789-0806

File in ACT/047/002

R RT to
maw &
jim
JMS

January 30, 1980

Mr. Ron Daniels
Division of Oil, Gas and Mining
1588 West North Temple
Salt Lake City, UT 84116

Dear Ron:

Enclosed please find our completed MR Form 3 for 1979. This includes updated maps and a description of reclamation work performed by Geokinetics in 1979.

Please contact us if there are any questions.

Very truly yours,

David L. Hutchinson

David L. Hutchinson

gb
cc:Concord
Vernal
Kamp
H. Spradlin
Enclosures

RECEIVED

FEB 04 1980

DIVISION OF
OIL, GAS & MINING

(To be filed for each Mining Operation at the end of each calander year)

Sec. 2 T. 14 R. 22 B&M

No. of approved Notice of
Utah Experimental Site #
INTENTION: ACT/047/002

(1) The gross amount of materials moved during the year for this mining operation was: No material was mined. Vegetation was disturbed on 12-15 acres during 1979. A map showing retorts blasted in 1979 is attached.

RESULTS

January	<u>See attached seed lists and description of reclamation</u>		
February	<u>work performed. Retort #1 was reclaimed, and revegetation</u>		
March	<u>test plots were established on Retorts #9, #14 and #15.</u>		
April			
May			
June			
July			
August			
September			

STATUS OF RECLAMATION WORK (Continued)

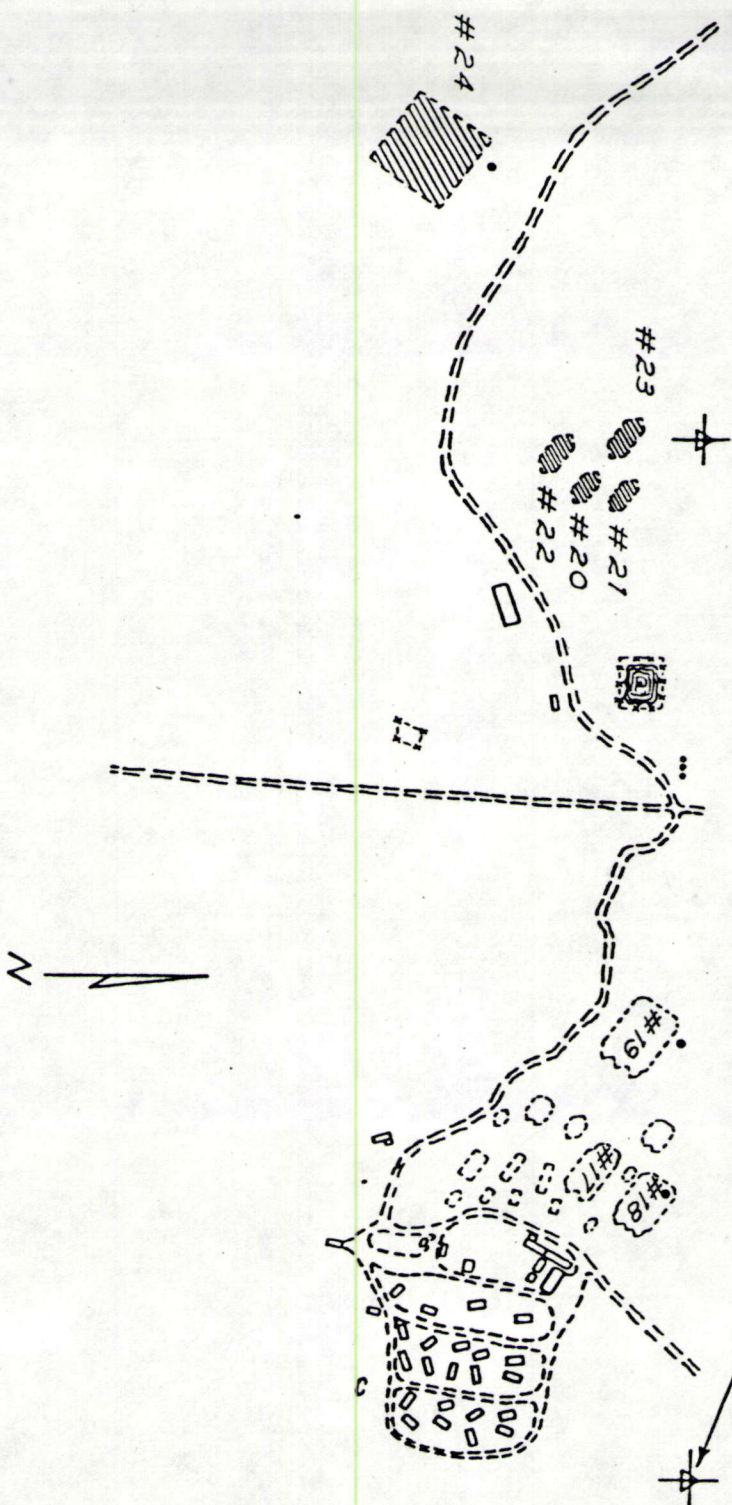
<u>Month</u>	<u>WORK PERFORMED</u>	<u>RESULTS</u>
October	See attached seed lists and description of reclamation	
November	work performed.	
December		

* The monthly status of reclamation work may be outlined on a separate sheet if desired,

(3) INCLUDE WITH THIS REPORT, AN UP-DATED MAP AND PLAN, PREPARED IN ACCORDANCE WITH RULE M-3, (1).

REPORTS BLASTED IN 1979

NE SEC. CORNER, SEC. 2, T14S
R22E, UTAH COUNTY, UTAH



0
500'
1000'
SCALE

GEOKINETICS INC.
*6

RETORTS

1. CROSS
HATCHING
INDICATES
RETORTS
BURNED TO DATE.

2. SOLID OUTLINE
INDICATES
REVEGETATION
TEST AREA.

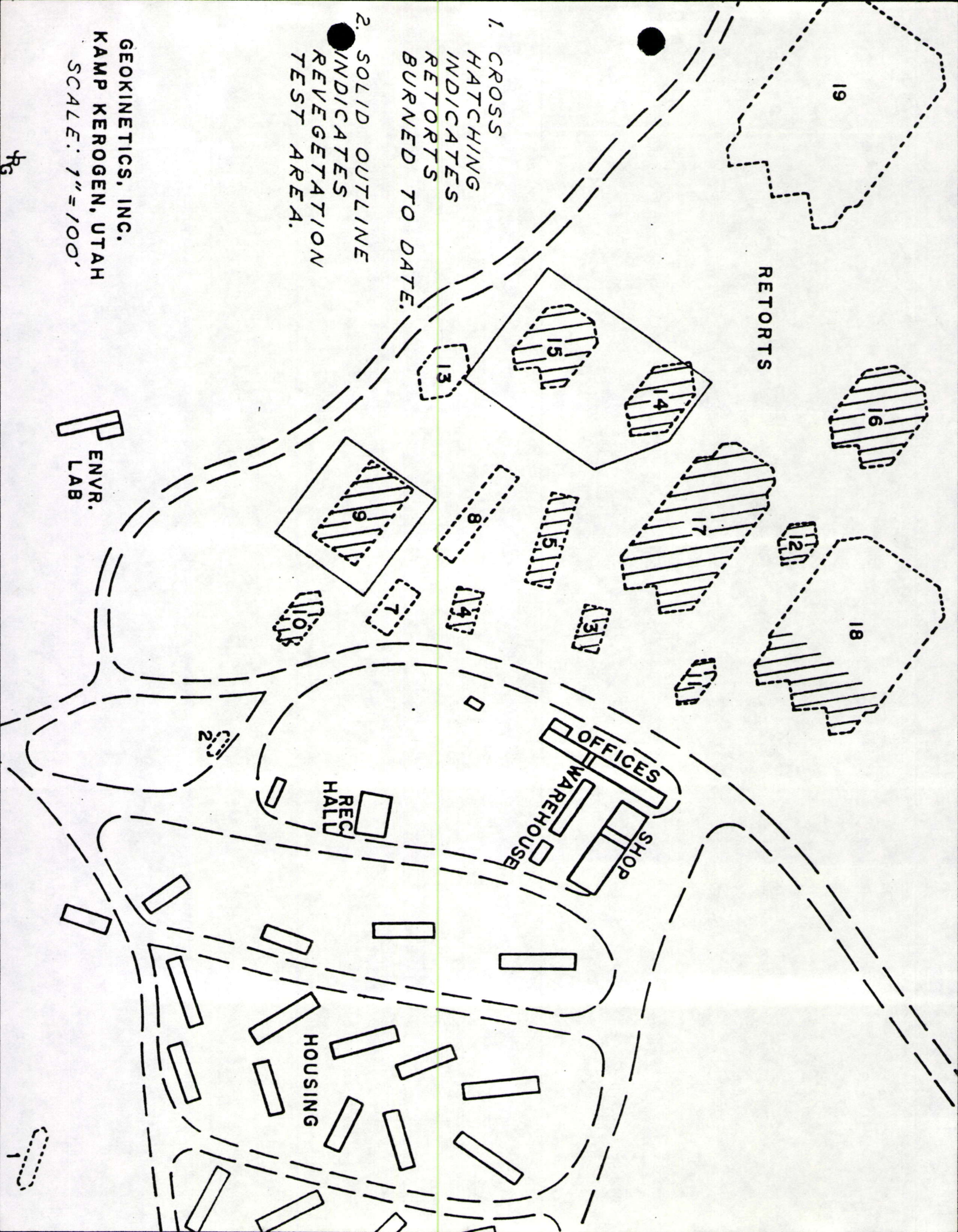
GEOKINETICS, INC.
KAMP KEROGEN, UTAH
SCALE: 1"=100'

ENVR.
LAB

REC
HALL

OFFICES
WAREHOUSE
SHOP

HOUSING



SUMMARY OF RECLAMATION WORK PERFORMED BY GKI IN 1979

Retort #1 was reclaimed during 1979. This very small retort area contained a prospect hole several feet deep, which was filled in.

A quarter-acre revegetation test area was established on and around Retort #9. The surface was prepared for planting by following recommendations in the Landscape and Erosion Control Plan. (A copy of this plan was sent to the Division of Oil, Gas and Mining.) A backhoe was used to rough the surface and create informal depressions and terraces. No mulching treatment or fertilizer was applied. On October 8, 1979, the following mix of seeds was planted in the test area:

<u>Common Name</u>	<u>Scientific Name</u>	<u>Lbs/Acre</u>	<u>Grams Used</u>
Western wheatgrass	Agropyron Smithii	4	454
Intermediate wheatgrass	Agropyron intermedium	4	454
Green needlegrass	Stipa viridula	2	227
Indian ricegrass	Oryzopsis hymenoides	2	227
Bluebunch wheatgrass	Agropyron spicatum	4	354.7
Mountain mahogany	Cercocarpus Montanus	<1	7.6
Utah sweetvetch	Hedysarum boreale	<1	28.3
Winterfat	Ceratoides lanata	<1	48.3
Four-winged saltbush	Altriplex canescens	<1	32.9
Total		<20	1833.8

The seed was spread with a hand seeder. After seeding, a chain was dragged across the flat parts of the site to cover the seed with soil. Some compaction of the soil was achieved by driving a light weight truck (used to pull the chain) across the site. A rake was used to rough up the ground and cover the seed on the sloped parts of the site. The test area was identified with stakes and flagging to prevent disturbance.

A half-acre revegetation test area was established on and around Retorts #14 and #15. Surface preparation (i.e., contouring and roughing) was achieved using a ripper attachment on a grader. Informal depressions and terraces were created as per the Landscape and Erosion Control Plan. No mulching treatment or fertilizer was applied. On November 8, 1979, the following mix of seeds was planted:

<u>Common Name</u>	<u>Scientific Name</u>	<u>Lbs/Acre</u>	<u>Grams Used</u>
Western wheatgrass	Agropyron <i>Smithii</i>	4	1557
Intermediate wheatgrass	Agropyron <i>intermedium</i>	4	867
Green needlegrass	<i>Stipa viridula</i>	2	320
Indian ricegrass	<i>Oryzopsis hymenoides</i>	2	382
Bluebunch wheatgrass	Agropyron <i>spicatum</i>	4	63
Mountain mahogany	<i>Cercocarpus Montanus</i>	<1	4
Utah sweetvetch	<i>Hedysarum boreale</i>	<1	27
Winterfat	<i>Ceratoides lanata</i>	<1	26
Four-winged saltbush	<i>Altriplex canescens</i>	<1	22
Thickspike wheatgrass	Agropyron <i>dasystachum</i>		679
Pubescent wheatgrass	Agropyron <i>trichophorum</i>		480
Blue grama	<i>Bouteloua Gracilis</i>		110
Pasture sage	<i>Artemesia frigida</i>		3
Total		<20	4540

The seed was spread with a hand-operated broadcaster and covered with soil by dragging a chain across the site with a small tractor. This also provided some compaction of the soil. This test area was also marked with stakes and flagging.

Vegetation soils and ecoclimate studies were completed during 1979. Reports on the results of these studies are available upon request.